ABSTRACT OF THE DISCLOSURE

The optical fiber includes a center core portion, a side core portion and clad portion, which has a dispersion value of 14-20 ps/nm/km at a wavelength of 1550 nm, a dispersion slope of 0.05-0.08 $ps/nm^2/km$ at a wavelength of 1550 nm and a transmission attenuation of 0.2 dB/km or less at a wavelength of 1550 nm, wherein the relative refractive index difference $\Delta 1$ between the center core portion and the clad portion is 0.25-0.50%, the relative refractive index difference $\Delta 2$ between the side core portion and the clad portion is 0.05-0.30%, an inequality $\Delta 2 < \Delta 1$ is satisfied, the ratio a/b between an outer diameter a of the center core portion and an outer diameter b of the side core portion is 0.3-0.7, and the effective core area Aeff at a wavelength of 1550 nm is 90 μm^2 or larger.